LOS ALAMOS

ENVIRONMENTAL RESTORATION PROGRAM INTERIM CHANGE NOTICE

EFFECTIVE DATE : (Dist. Date) 4/27/95 ICN No. 011 Page 1 of 1

Document No. LANL-ER-SOP-01.01 **Rev.** 0 **Title:** General Instructions for Field Investigations

Reason for Change:

Attachment B, SOP Training Documentation Check List has been superseded by Attachments C and D in LANL-ER-AP-05.2, R1, Determination, Completion, and Documentation of Environmental Restoration Worker Training. Attachment C is Read Training Documentation Form, and Attachment D is ES&H Training Checklist.

Description of Change (Specify page, paragraph, and/or section revised, and clearly write new text to be incorporated in the document).

Page 2, Section 2.2.
Change "SOP Training Documentation Check List (Attachment B)" to "LANL-ER-AP-05.2, R1, Determination, Completion and Documentation of Environmental Restoration Worker Training, Attachment C, Read Training Documentation Form, and Attachment D, ES&H Training Checklist."

Page 7, Section 6.2.
Change "SOP Training Documentation Check List (Attachment B)" to "LANL-ER-AP-05.2, R1, Attachments C and D."

Page 9, Section 7.0.
Add: LANL-ER-AP-05-2, R1, Determination, Completion, and Documentation of Environmental Restoration Worker Training.

Page 9, Section 8.0.
Delete "SOP Training Documentation Check List" and replace with "LANL-ER-AP-05.2, R1, Attachment C, Read Training Documentation Form, and Attachment D, ES&H Training Checklist."

Page 9, Section 9.0.
Delete "Attachment B, SOP Training Documentation Check List."

Change Requested by:	KATHY ARMSTRONG (Print)	Kathy Armstrong (Signature)	4-24-95 (Date)
Functional Reviewer	TRACY G. GLATZMAIER (Print)	Tracy G. Glatzmaier (Signature)	4/24/95 (Date)
Program Manager Approval:	TRACY G. GLATZMAIER (Print) for	Tracy G. Glatzmaier (Signature) for	4/24/95 (Date)
Quality Program Project Leader (QA review and approval)	LARRY SOUZA (Print)	(Signature)	4/24/95 (Date)

S95080.FRM

Los Alamos National Laboratory **Environmental Restoration Program** **Standard Operating Procedure**	No: LANL-ER-SOP-1.01 Rev: 0 Interim Procedure

General Instructions for Field Investigations

Prepared by	Sandra E. Wagner (Print Name)	Sandra E. Wagner (Signature)	2-27-92 (Date)
Quality Review by	Larry Maassen (Print Name)	Larry Maassen (Signature)	28 Feb 92 (Date)
Technical Review by	Paul L. Arnodt (Print Name)	Paul L Arnodt (Signature)	March 3, 1992 (Date)
PM Approval	Robert W Vocke (Print Name)	Robert W Vocke (Signature)	March 4, 1992 (Date)
QPPL Approval	Karen L Warthen (Print Name)	Karen L Warthen (Signature)	3/4/92 (Date)

Effective Date: 3-16-92

General Instructions for Field Investigations

Table of Contents

General Instructions for Field Investigations

1.0 PURPOSE

The purpose of this procedure is to provide an overview of instructions regarding activities to be performed before, during, and after field investigations. These activities and associated Standard Operating Procedures (SOPs) are shown in the Field Activity Flow Chart in Attachment A.

2.0 SCOPE

2.1 Applicability

This procedure will be used by all site workers for all Environmental Restoration (ER) program field operations.

2.2 Training

All site workers will document on the SOP Training Documentation Check List (Attachment B) that they have read and understand this procedure, other procedures in Section 1.0, General Instructions, and other appropriate SOPs.

3.0 DEFINITIONS, RESPONSIBILITIES, AND ACRONYMS

A. Operable Unit Project Leader (OUPL): Responsible for all Resource Conservation and Recovery Act (RCRA) investigations concerning the assigned OU, ensuring site workers are trained, readiness reviews performed, and appropriate regulators, Department of Energy (DOE) and LANL offices are informed of sampling events.

B. Field Team Leader (FTL): Responsible for implementing the Sampling and Analysis Plan (SAP) and the project specific Quality Assurance Project Plan (QAPjP), ensuring that site workers have the required Health and Safety (HS) training, and assisting the OUPL in ensuring that training to applicable SOPs is accomplished.

C. Radiation Protection Technician: Responsible for monitoring radiation levels onsite. The Radiation Protection Technicians are trained Health Physics Operations (HS-1 group or approved designee) personnel.

D. Industrial Hygienist: Responsible for monitoring industrial hygiene conditions affecting site worker health and safety. Industrial hygienists are trained Industrial Hygiene (HS-5 group or approved designee) personnel.

E. Health and Safety Project Leader (H&SPL): The H&SPL is responsible for reviewing the OU-specific H&S Plan to determine if all requirements for the health and safety of site workers, Laboratory personnel, and contractors are addressed.

   The H&S PL coordinates with ER, HS-1, Occupational Medicine Group (HS-2), Safety and Risk Assessment Group (HS-3), and HS-5 for resources for the implementation of the requirements of the H&S plan.

F. Site Safety Officer (SSO): HS-5 personnel (or their approved designee) responsible for worker health and safety; for example, ensuring that assigned workers are physically fit, that the required safety practices are observed, and that workers are monitored for health protection on site. (See Annex III, Section 5, IWP for functional reporting).

G. Field Team Members (FTM): May include Los Alamos National Laboratory (LANL) personnel, contractors, and subcontractors. They will be responsible for safely conducting the assigned field work in a manner that collects technically valid and legally defensible data.

H. Site Worker: Summary term for all of the above referenced individuals.

I. Technical Team Leader (TTL): Responsible for his/her team's involvement with integrating the team's technologies and methodologies, both new and existing, into the ER Program, including ensuring appropriate training is obtained.

J. HAZCAT: Hazard Categorization: A set of simple field procedures that enhances the safe handling and legal transportation of unknown materials. It does not take the place of a full laboratory analysis. The use of HAZCAT procedures will determine the correct Department of Transportation (DOT) shipping category for a sample.

K. Radiological Screening: A set of radiological measurements to be made prior to shipment of materials off site.

L. SCF: Sample Coordination Facility

M. SCF Coordinator: Responsible for coordinating the ER program's sample collection activities and sample analysis.

N. Exclusion Zone: The Exclusion Zone is considered to be the area onsite of highest potential for hazardous material exposure, into which access is restricted.

O. Contamination Reduction Zone: The Contamination Reduction Zone (CRZ) is designed to eliminate the spread of contaminated materials between the Exclusion and Support Zones on-site. A CRZ will be established around each Exclusion Zone so that the Exclusion Zone is completely isolated from the Support Zone.

P. Support Zone: The Support Zone includes those areas on-site outside the Exclusion and Contamination Reduction Zones and is considered to be the area of minimal potential risk of exposure to hazardous materials.

Q. Analytical Levels Appropriate to Data uses:

Level I - Total organic or inorganic vapors are detected using portable instruments such as Photoionization Detectors (PIDs). Field test kits for metals are also included in this level.

Level II - A variety of organics are detected using a field Gas Chromatograph, inorganics are detected with field instruments including Atomic Absorption Spectrophotometer and X-ray Fluorescence Spectrophotometer. The analysis provides tentative analyte specific identification.

Level III - Organic and inorganic compounds are determined using EPA procedures other than Contract Laboratory Program (CLP) and can be analyte specific.

Level IV - Pertains to non-conventional parameters and may include modification of existing methods. The detection limits are method-specific.

4.0 BACKGROUND AND/OR CAUTIONS

N/A

5.0 EQUIPMENT

N/A

6.0 PROCEDURE

6.1 Premobolization Activities

A. The OUPL or OUPL designee will conduct a readiness review meeting before field events that implement RFI sampling plans. The attendees will be, at a minimum, and as appropriate, the following site workers:

- FTL and field team managers, if appropriate,
- Industrial Hygienist,
- H&SPL
- SSO
- TTL(s), and
- SCF Supervisor.

If individuals in the positions above are unable to attend, a designee should be present.

The readiness review meeting will, at a minimum, ensure that

- appropriate site workers are scheduled and available,
- applicable plans and procedures for use during field events are assembled,
- sample containers, labels, and documentation material (e.g., forms, pens, tape, etc.) are accessible,
- appropriate analytical laboratories are notified and prepared for incoming samples,
- equipment is available for sampling event, and
- responsibilities applicable to specific subject areas (i.e., H&S, SOPs, etc.) are evaluated and that supplies and equipment are obtained by appropriate individuals.
- attendance at readiness review meetings will be documented (Attachment C is an example of an attendance form).

Additionally, appropriate regulators, DOE personnel, and LANL offices will be invited to attend.

B. Site workers will review the procedures presented in this document as well as all other Section 1.0, General Instructions, Standard Operating Procedures (SOPs). In addition, site workers will review SOPs, SAPs, and H&S Plans that are specific to the field effort.

C. The OUPL is responsible for contacting LANL divisions, subcontractors, and regulatory agencies. The ER Community Relations TTL is informed of the intent to mobilize for a an RFI so that he/she will be prepared to answer media questions. Field materials are organized and carefully loaded for transportation to the site, and site workers prepare to mobilize to the site.

6.2 Mobilization to the Site

A. Once on site, separate areas may be designated by the FTL, with SSO approval, for operations management and analytical needs. These may include but are not limited to the following:

1. Data Management Area: A central area that is sheltered from weather will be set up in the support zone for temporarily retaining all documentation generated during the field effort until requested by the OUPL.

2. Sample Management Area: An area that is sheltered from weather may be set up in the support zone. All sampling equipment for the field event will be stored here when not in use, (this includes spare sample containers, identification labels, coolers, field screening equipment, etc.). In addition to sampling equipment, samples will be handled in this area after screening results have been received. Samples will be stored here until they can be sent to the SCF to ensure that chain of custody is not broken..

3. Screening Area: An area sheltered from weather that is used for the purpose of rapidly field screening sample material for radiological and chemical contamination using analytical Levels I, II, and V. This area can be provided in the field by EM-9 and may be located in the contamination reduction zone. All samples, decontaminated sampling equipment, and materials will be stored here until screening results have been received. Samples will be handled at this location to reduce the potential of contamination from the surface of the container. In addition, excess media (soil, cores, sediment, biota, etc.) will be stored in this area until screening results have been received and media can be transferred to the curation staging area or disposed of as waste.

4. Curation Staging Area: A specified area in the support zone that is sheltered from the weather and is used to temporarily store excess media that meets curation criteria as defined in the SOPs in Section 12.0,

Curatorial Management Activities, and that may be used in future analyses. The media will be transferred to a permanent curation storage facility from this area. This area will be provided by EES.

5. Field Analytical Laboratory: An area designated for analyzing samples may be set up in the support zone. This area will be sheltered from the weather and will contain field analytical instruments. This area will be provided by EM-9. The function of this laboratory is to provide on-site analytical capabilities up to Level III Analysis.

6.3 Data Collection Activities

A. One copy of all LANL-ER-SOPs in Section 1.0, General Instructions, will be kept on site in the data management area at all times, and will be made available to all site workers. All site workers must have documented on the SOP Documentation Check List (Attachment B) that they have read and understand these procedures.

B. FTL or designee will conduct daily by reviewing the site-specific Health and Safety Plan. All site workers will attend as well as any subcontractors participating in any part of the field effort.

C. Calibrate equipment in accordance with procedures described in the site-specific SAP, LANL ER SOPs, or in the equipment instruction manual.

D. Document all activities relating to the progress of the RFI. The following mandatory forms are provided by the SCF and will be used for field documentation and sample identification, and will be completed daily. See LANL-ER-SOP-01.04, Sample Control and Field Documentation, for specific information to be included on these documents.

1. Daily Activity Log: The FTL is responsible for completing this log and will record all information pertinent to the investigation on it.

2. Unique Sample Identification (ID) Number Stickers: A sheet of sample ID number stickers will be provided for each sample collected. Each sheet will have at least ten sample stickers with identical numbers. The number series will be unique to each sheet of sample stickers and, therefore, will be unique for each sample. All sample control will be through the unique ID number.

3. Sample Labels: Preprinted sample labels provide sample information. A sample label will be attached to every sample that is collected. The SCF will accept only those samples with affixed sample labels.

4. Sample Collection Log: A Sample Collection Log will be completed for every sample suite collected. All information pertaining to specific samples in a suite is recorded on this log.

5. Chain-of-Custody/Request for Analysis Forms: A Chain-of-Custody/Request for Analysis form will accompany every sample(s) and every shipment of samples to the SCF in order to establish the documentation necessary to trace sample possession from the time of collection to final disposition. The SCF will accept only those samples accompanied by a Chain-of-Custody/Request for Analysis Form.

6. Custody Seals: A custody seal will be placed over the lid of each sample container. For 40 millimeter vials, the seal will not be placed over the septa; instead, wrap the seal horizontally around the bottle and lid. Binding tape will be placed around the sample shipping-container, and a custody seal will be placed over the binding tape. Custody seals will be signed and dated by a member of the sampling team.

E. Field documentation will be submitted daily to the field files located in the Data Management Area. Data will be reviewed daily by the FTL, and signed, as appropriate.

F. A representative portion of the media collected will be used for Radiological and HAZCAT Screening.

G. Waste generated during the field effort will be managed according to LANL-ER-SOP-1.06, Management of RFI-Generated Waste. For general questions pertaining to waste handling, contact EM-7, at 665-4000.

6.4 Sample Media Evaluation

A. Where an on-site screening area is available, a representative portion of the media collected will be screened before the samples are preserved (See LANL-ER-SOP-01.02, Sample Containers and Preservation) and delivered to the SCF for packaging and shipment to the designated laboratory(ies) (See LANL-ER-SOP-01.03, Handling, Packaging and Shipping of Samples).

   If the samples are not screened on site, the sample will be preserved in the Contamination Reduction Zone and sent to the SCF promptly after collection and will be screened for radioactive and hazardous constituents at the facility. After the samples are screened, they will be packaged and shipped to designated laboratory(ies).

B. If the screening results indicate that the excess material meets the curation criteria, it will be packaged and temporarily stored at the curation staging

area on-site until it can be transferred to a permanent curation storage facility. If curation is unnecessary or if it does not meet curation criteria, the excess material will be dealt with as waste per LANL-ER-SOP-1.06, Management of RFI-Generated Waste.

C. The designated laboratory receiving the samples will analyze the samples and report the results to the SCF. The SCF will validate the data and transfer the results to the OUPL. These results will used in determining further corrective actions.

D. The OUPL is responsible for ensuring that copies of all records and data generated as a result of the field investigation and readiness review are sent to the ER Records Processing Facility per LANL-ER-AP-2.01, Procedure for Environmental Restoration Records Management.

7.0 REFERENCES

LANL-ER-AP-2.01, Procedure for Environmental Restoration Records Management
LANL-ER-SOP-1.01, General Instructions for Field Personnel
LANL-ER-SOP-1.02, Sample Containers and Preservation
LANL-ER-SOP-1.03, Handling, Packaging, and Shipping
LANL-ER-SOP-1.04, Sample Control and Field Documentation
LANL-ER-SOP-1.05, Field Quality Control
LANL-ER-SOP-1.06, Management of RFI-Generated Waste

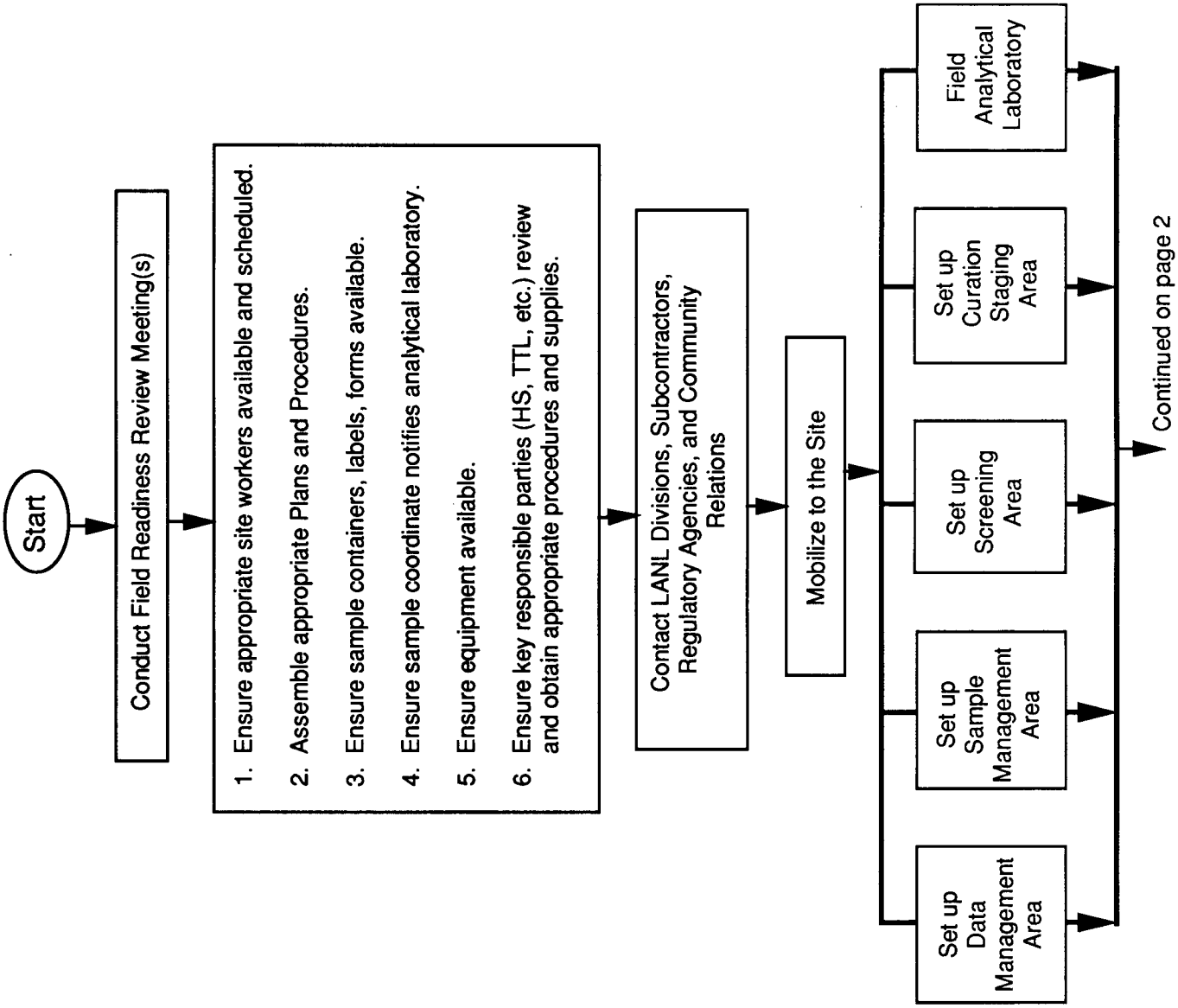
8.0 RECORDS

Readiness Review Attendance Documentation
SOP Training Documentation Check List

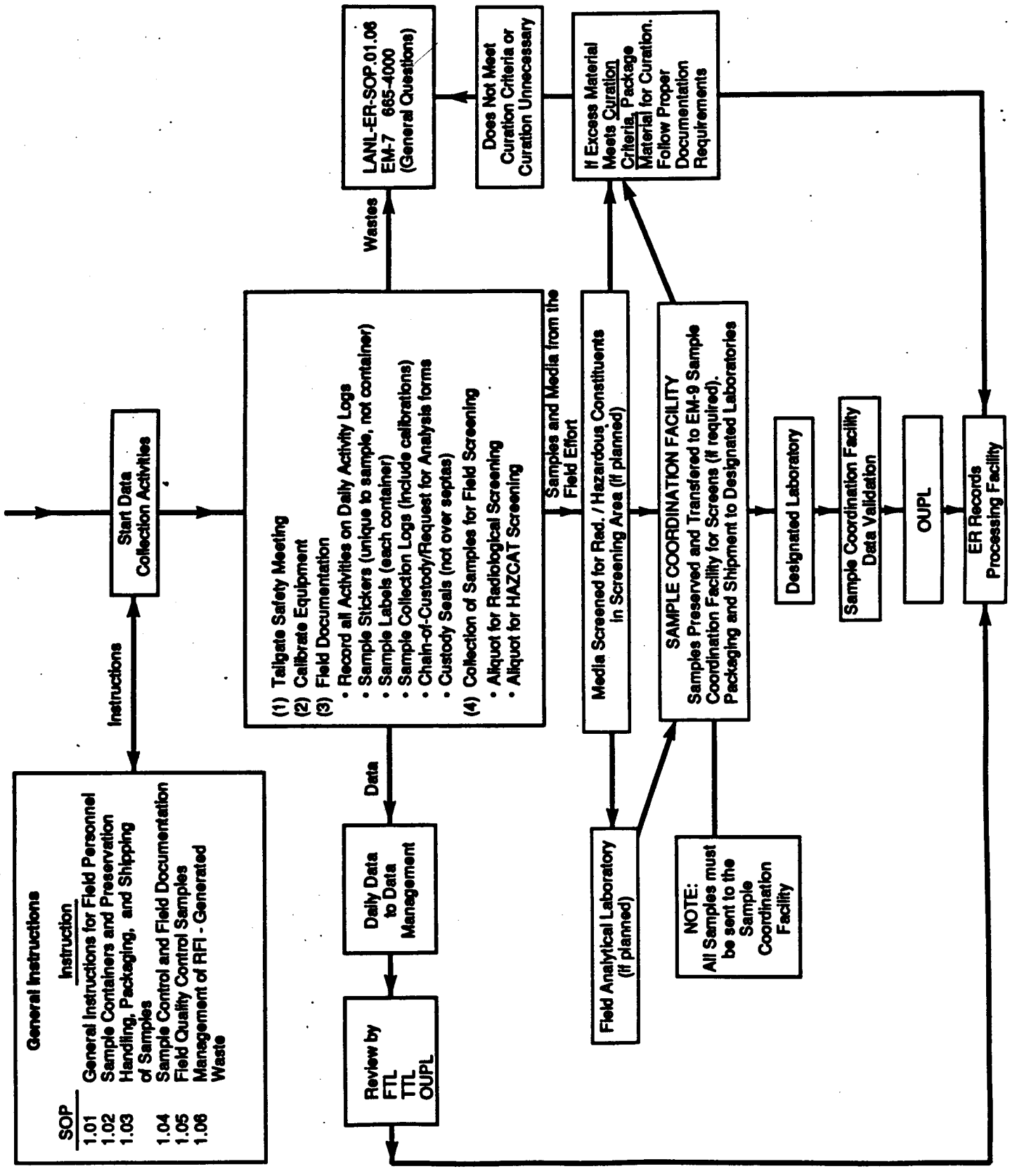
9.0 ATTACHMENTS

Attachment A - Field Activity Flow Chart
Attachment B - SOP Training Documentation Check List
Attachment C - Readiness Review Attendance Form

Los Alamos National Laboratory Environmental Restoration
FIELD ACTIVITY FLOW CHART



Los Alamos National Laboratory Environmental Restoration
FIELD ACTIVITY FLOW CHART (continued)



Los Alamos National Laboratory
Environmental Restoration SOP Training Documentation Check List

Date: _____ Sheet ____ of ____

Technical Area _____

Operable Unit _____

Signature of FTL: _____

Site Work Plan: _____

Your initials next to a procedure indicates that you have read and understood the procedure.

_____ SOP-1.01, General Instructions for Field Investigations

_____ SOP-1.02, Sample Containers and Preservation

_____ SOP-1.03, Handling, Packaging, and Shipping of Samples

_____ SOP-1.-04, Sample Control and Field Documentation

_____ SOP-1.05, Field Quality Control Samples

_____ SOP-1.06, Management of RFI-Generated Waste

Additional procedures:

_____

_____

_____

_____

_____

_____

Name: _____

Signature: _____

Date: _____

Employer: _____

Los Alamos National Laboratory Environmental Restoration
READINESS REVIEW MEETING ATTENDANCE FORM

Page 1 of _____

SUBJECT: _____

OBJECTIVE(S): _____

Meeting conducted by:

Print Name	Signature	Date

EXAMPLE

CONTACT THE ER PROGRAM OFFICE (665-4557) TO OBTAIN ORIGINAL FOR YOUR USE

PRINTED NAME	SIGNATURE	ORGANIZATION/MS	PHONE
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	

Los Alamos National Laboratory Environmental Restoration
READINESS REVIEW MEETING ATTENDANCE FORM
(continuation form)

Page _____ of _____

SUBJECT: _____ DATE: _____

PRINTED NAME	SIGNATURE	ORGANIZATION/MS	PHONE
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	
		/MS	